hich Arise to Characterize Every War

to the lind w

e withdrawal of some ered to retire on St.

ing till their infantry allies' line, the Ger- upon various tactical bardment was carried osive shell and shrap- les containing asphyx- rward.

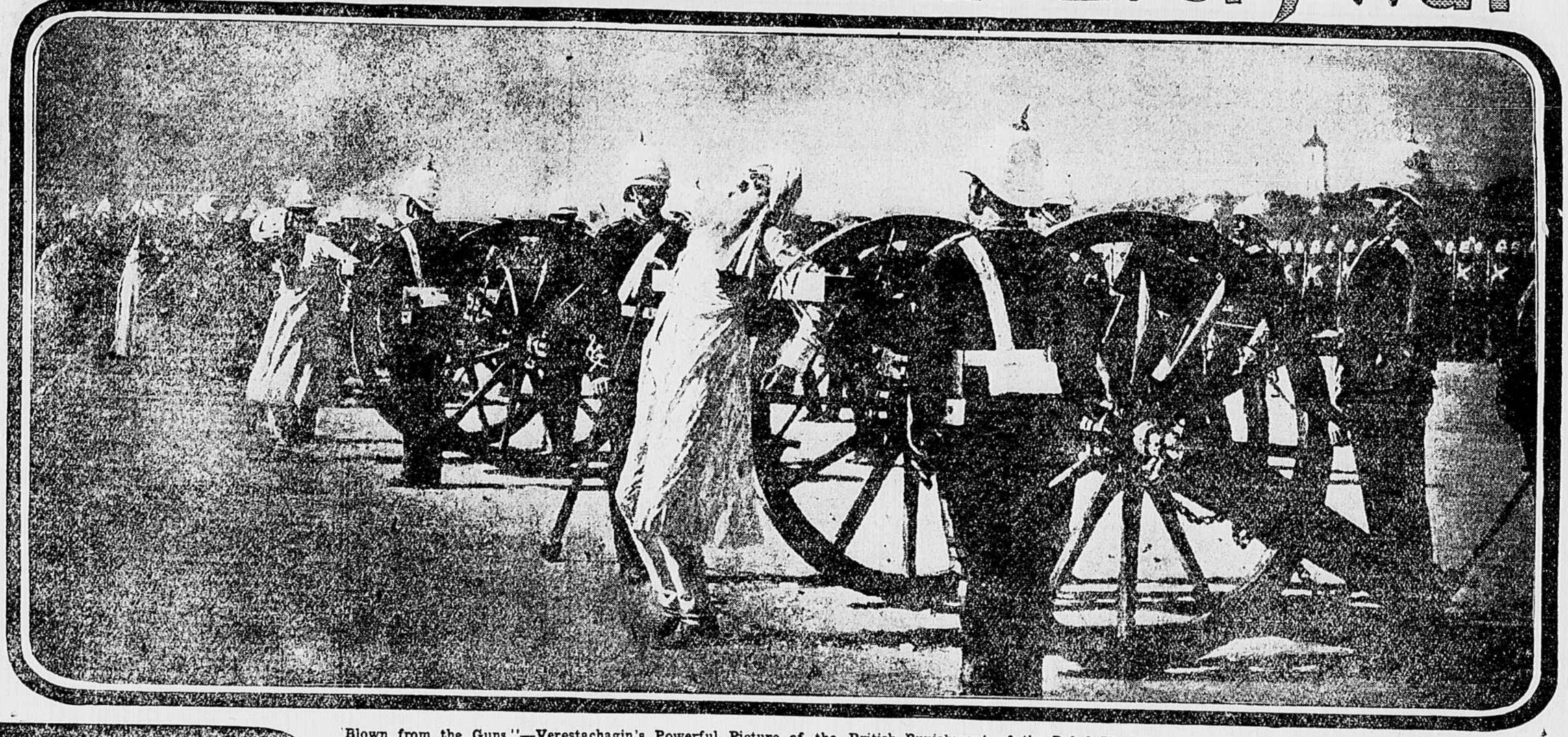
east of the town there ace behind a wall of s and through woods. hese woods and over ing line, the men with d by pads soaked in a

was the fourth day of counter attack at St. , but were checked in afternoon the Germans great strength on our tacks being backed up ardment and a rain of

by the gases at Ypres, lls, Ont., belonging to tation, furnished this l experience after his

poisonous stuff, but I to make a soldier run. the scene the noxious ed, but what was left eyes to go tight shut, pt for a second or so. p my nose and throat, orners of my eyes. It n and push ahead, half were."

ed exclusively for the



"Blown from the Guns."—Verestachagin's Powerful Picture of the British Punishment of the Rebel Hindus.

ers of Carthage by the Use of Trained Elephants in 238 B. C.
. Surand.

ht havoc among the arge into and occupy air was still heavily d fell in this atmos- he rear of the lines their faces having

e, appointed to inves- he ground that they Convention," reported 00 feet into the air an lines by the wind. it the base, gradually ie top. Several kinds d, including chlorine, anhydride, and others, been determined.

l, the report says, in rst was to light fires l permit the wind to lines of the Germans' methods involved in- f missile. These in- nd or mine howitzers, shells containing com- d into gas when they

re felt a distance of half a mile. They produce agonizing suffocation.

The Patent Office records show that the Krupps patented a gun for throwing a poisonous gas bomb some years before the war. The specifications state that it will throw 160 pounds of explosive a distance of 400 yards. Experts say that the explosion will cause death to everybody within a radius of 400 feet.

The explosive bomb is placed outside the muzzle of the gun. It is driven by a steel rod which occupies the bore of the gun and which separates automatically from the bomb after the necessary impetus has been given to the latter.

The allies, after the Ypres battle, immediately set to work to find means to neutralize or, at least, minimize, the poisonous gases of the Germans. The British troops were supplied with respirators, which enable a man to live for a time in an atmosphere charged with the heavy gas and also give him a chance to escape, when necessary, to some higher ground.

The most effective chemical method of combating the poisonous gas, bromine chloride, is said to have been devised by a French chemist, who sprays ammonia into the air, which combines with the gas to form a non-injurious ammonium bromide.

The use of poisonous gases and of shells of incomparably greater power than any ever used before have produced a vast number of extraordinary nervous injuries among British and French soldiers of a kind never observed before. Men have been driven blind, dumb, deaf and insane, deprived of taste and affected in other peculiar ways.

Many of these injuries were due to the bursting of big shells in the vicinity of the men, not injuring them visibly, but causing disintegration of the nerve endings and other parts of the nervous system, but others were due to the gases.

The Germans at the beginning of the war had a supply of colossal 42-centimetre field guns (about fifteen inches), and it is now reported that they are using seventeen inch guns. The shells of these weapons on striking the ground make a hole over thirty feet deep and ninety feet in circumference, causing death to all who come within a certain distance of their crushing, devastating wind.

Abundant evidence has been received of the strange and unusual diseases caused by the novel and devilish weapons of this war. Dr. Charles S. Myers, of the British Army Medical Corps, attached to the Duchess of Westminster's Hospital at Le Touquet, France, has published a study of the remarkable effects produced by "shell shock" on soldiers under his care. His report has excited much discussion among doctors.

One of Dr. Myers's patients, a private, aged twenty, told him that he had "rather been enjoying it" and was in the best of spirits up to the moment the shells burst about him.

In order to get away he had to crawl under wire entanglements, and in doing so he became hooked. At this moment one shell burst just in front of him and another behind him. Finally he managed to get into a trench. He found it hurt him to open his eyes and they burned when closed. He was seized with shivering and cold sweat broke out, especially around the loins. He says the shell behind him was "like a punch on the head without any pain after it."

He kept crying and shivering at the hospital and worrying whether he was going blind. He had been in the field two months before this accident and had slept badly, having toothache and pains in the back. Under treatment his general physical condition rapidly improved, but all the nervous peculiarities of shell shock persisted. He could hardly see with his left eye, although he had good sight before the accident. He reported that a strong solution of salt gave no taste on his tongue and that a very strong solution of sugar was only slightly sweet. Carbolic acid, ether, strong peppermint and iodine gave no smell to him. At the end of four months of treatment his nervous symptoms had nearly disappeared.

Another patient, a corporal, aged twenty-five, was in a trench when a shell burst within two yards of him without causing any wound. The first thing he noticed was that he could hardly see. It should be noted that this man had led a "fast life" before his trouble and had drunk whiskey heavily. He could taste a very strong solution of sugar only after he had moved it around on his tongue for some time. A strong solution of salt, he said, tasted "like gasoline on the hand." He could not recognize yellow, blue and green, although he had not suffered from color blindness before his trouble, but he could recognize red.

He could only remember that he was buried up to the neck when the shell fell and that Sergeant Lewis dug him out, but he could not remember what any of the doctors or soldiers who handled him after his rescue had done for him.

Hypnotic treatment was tried on him with the object of restoring his memory. While in the hypnotic state he was told of things that had happened to him after his trouble and questioned about them. Under the treatment his memory improved considerably.

Another man, a private aged twenty-three, was blown off a heap of bricks fifteen feet high, owing to shell bursting near him. He thinks he fell into a pool of water, as he remembers finding himself about five hours later in a cellar, near a church, with his clothes drenched. He could not remember how he got into the cellar nor anything that happened between that and his being taken to the hospital. His sight was more affected than any other sense. He could not see objects at the distance at which he had been accustomed to see them, and when looked at nearer they became blurred. He seemed always on the point of fainting, felt cold and dizzy, and experienced a "round and round movement of the stomach."

The slightest touch on the legs provoked spasms of the large muscles of the thigh. Tickling the soles of his feet produced no effect. The muscles of the toes were in a state of continuous contraction.

His eyesight improved under the influence of various glasses that had no relation to any defects of his eyeball. His left nostril failed to detect the odor of ether, peppermint, eucalyptus, ammonia, carbolic acid and iodine, but the right nostril recognized all of them except iodine. His ability to taste sugar, salt and acid was very faint.

The blindness or defective vision caused by shell shock is defined by doctors as "traumatic amblyopia." It is a disease which has previously been observed in cases of prolonged and intense stimulation of the eye. For instance, similar blinding by direct sunlight has occurred among observers after every big solar eclipse. In some soldiers there is complete "shell blindness," without visible injury to the eye.

The deafness noted among soldiers suffering from shell shock is in some cases like that produced among boiler-makers, riveters and persons working on railways. The terminals of the auditory nerves are overstimulated by responding to loud sounds of a certain pitch for days at a time and so lose their functions. Such cases may recover with rest.

In other cases of shell shock there is internal injury to the nerves. A shell passing near the backbone of a man in a trench has caused violent dispersal of the cerebro-spinal fluid, producing sudden death.

A sudden jar to nerve elements of the eye and ear caused by the near bursting of a shell has produced both blindness and deafness without visible injury.

Invalided English soldiers have suffered for weeks with a continuous ringing in the ears and a feeling that they were continually turning head over heels, while others have felt themselves continually turning round and round.

Soldiers suffering from shell shock are unable to hear notes as high as formerly.

British Soldier Made Deaf, Dumb and Blind by a Poison Shell Being Tenderly Led by a Hospital Nurse.

French Grenadiers in Napoleon's Time Executing Russian Peasants in a Church.